

Amendments to the Claims

Please add new claims 12-15 as shown below.

Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims.

1. (Previously presented). A method for monitoring a manufacturing process comprising:

performing an analysis by using values of at least one process parameter of the manufacturing process of a plurality of physical objects;

determining one physical object from the plurality of physical objects which best characterizes the plurality of physical objects, based on the analysis of the at least one process parameter; and

selecting the one physical object which best characterizes the plurality of physical objects, for monitoring the manufacturing process.
2. (Original). The method as claimed in claim 1, in which the physical object is a wafer.
3. (Original). The method as claimed in claim 1 or 2, in which the analysis is a statistical analysis.
4. (Original). The method as claimed in one of claims 1 to 3, in which the values of the at least one process parameter are measured when the physical object is being manufactured.
5. (Previously presented). The method as claimed in one of claims 1 to 4, in which the physical object selected is subjected to a quality checking measurement for checking the quality of the respective physical object.

6. (Previously presented). The method as claimed in claim 5, in which, for ascertaining the variation of the qualities of the physical objects, a physical object for which the value of the at least one process parameter has a prescribed difference from the physical object selected is additionally subjected to a quality checking measurement.

7. (Original). The method as claimed in claim 1 or 6, in which the statistical analysis comprises the ascertainment of the median of the values of the at least one process parameter.

8. (Original). The method as claimed in claim 1 or 7, in which the statistical analysis comprises the ascertainment of the arithmetic mean value of the values of the at least one process parameter.

9. (Withdrawn). A device for the monitoring of a manufacturing process of a plurality of physical objects with a processor which is set up in such a way that the following method steps can be carried out:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

10. (Withdrawn). A computer-readable storage medium, in which a program for the monitoring of a manufacturing process of a plurality of physical objects is stored, which program has the following method steps when it is run by a processor:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

11. (Withdrawn). A computer program element for the monitoring of a manufacturing process of a plurality of physical objects, which has the following method steps when it is run by a processor:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

12. (New). A method for monitoring a manufacturing process, the method comprising:

statistically analyzing values of a process parameter of the manufacturing process to identify manufactured objects having product quality which is typical of a lot of manufactured objects;

randomly selecting test objects from among the manufactured objects having product quality which is typical of quality of the lot of manufactured objects; and

making test measurements on the test objects to characterize the quality of the lot of manufactured objects.

13. (New). The method of claim 12 wherein statistically analyzing values of a process parameter comprises determining a median value of the values of the process parameter.

14. (New). The method of claim 12 wherein statistically analyzing values of a process parameter comprises determining an arithmetic mean value of the values of the process parameter.

15. (New). The method of claim 12 further comprising:
detecting values of the process parameter during the manufacturing process;
storing the detected values;
retrieving the stored values;
determining a median of the retrieved values; and
selecting as the test objects those manufactured objects having a process parameter close to the median as the manufactured objects having product quality which is typical of quality of the lot of manufactured objects.